BIOLOGY

BOOKS - MODERN PUBLICATION

TRANSPORT IN PLANTS

Exercise

1. Osmotic pressure of a solution is

Watch Video Solution

2. Distinguish between:

Osmotic potential and matric potential.

Watch Video Solution

3. Name the major sets of internal factors which determine the value of water potential.

Watch Video Solution

4. What increases the water potential of a solution?

 Watch Video Solution

5. Name two factors that affect water potential.

 Watch Video Solution

6. What will happen to the osmotic pressure when there is an increase in the concentration of solute?

Watch Video Solution

7. If a cell is placed in hypotonic solution,what will happen ?

Watch Video Solution

8. Is water potential measurable ? How is it represented and measured?

Watch Video Solution

9. What is the water potential of pure water at atmospheric pressure?

Watch Video Solution

10. What is isotonic solution?

Watch Video Solution

11. Sir J.C. Bose proposed a theory to explain the process of ascent of sap. Name the theory.

Watch Video Solution

12. Name the structure through which ascent of sap takes place.

Watch Video Solution

13. What is active absorption of water?

Watch Video Solution

14. What is bleeding in plants?

Watch Video Solution

15. How aeration affects the process of absorption of water?

Watch Video Solution

16. What are three fractions of water in the soil?

Watch Video Solution

17. Name the following:

Tisse through which ascent of sap occurs.

Watch Video Solution

18. Name the following:

Universal solvent.

19. What are the factors affecting the rate of diffusion?

20. What are porins? What role do they play in diffusion?

Watch Video Solution

21. Describe the role played by protein pumps during action transport in plants.

Watch Video Solution

22. Explain why pure water has the maximum water potential.

Watch Video Solution

23. Differentiate between the following: Diffusion and Osmosis

Watch Video Solution

24. Differentiate between the following:

Transpiration and Evaporation

Watch Video Solution

25. Differentiate between the following:

Osmotic Pressure and Osmotice Potential

Watch Video Solution

26. Differentiate between the following: Imbibition and Diffusion

Watch Video Solution

27. Differentiate between the following: Apoplast and Symplast pathways of movement of water in plants.

Watch Video Solution

28. Differentiate between the following: Guttation and Transpiration

Watch Video Solution

29. Briefly describe water potential. What are the factors affecting it? Explain the relationship between water potential, solute potential and pressure potential.

Watch Video Solution

30. What happens when a pressure greater than the atmospheric pressure is applied to pure water or a solution?

Watch Video Solution

31. With the help of well-labeled diagrams. Describe the process of plasmolysis in plants, giving appropriate examples.

Watch Video Solution

32. Explain what will happen to a plant cell if it is kept in a solution having higher waterr potential.

Watch Video Solution

33. How is the mycorrhizal assoication helpful in absorption of water and minerals in plants?

Watch Video Solution

34. What role does root pressure play in water movement in plants?

Watch Video Solution

35. Describe transpiration pull model of water transport in plants. What are the factors infulencing transpiration? How is it useful to plants?

Watch Video Solution

36. Discuss the factors responsible for ascent of xylem sap in plants.

Watch Video Solution

37. What essential role does the root endodermis play during mineral absorptin in plants?

Watch Video Solution

38. Explain why xylem transport is unidirectional and phloem transport bi-directional.

Watch Video Solution

39. Explain pressure flow hypothesis of translocation of sugars in plants.

Watch Video Solution

40. What causes the opening and closing of guard cells of stomata during transpiration?

Watch Video Solution

41. Which of the following is used to measure the rate off transpiration?

A. Potometer

B. Prometer

C. Osmometer

D. Osmoscope

Answer:

Watch Video Solution

42. Plant will undergo silting under one of these conditions?

A. High temperature

B. High humidity

C. Heavy rainfall

D. Absorption off water

Answer:

Watch Video Solution

43. If CO_2 concentration suddenly increass around the leaf ,one of the ffollowing events occuurs:

A. Stomata open gradually

B. Stomata open suddenly

C. Transpiration will not be affected

D. Decrease in transpiration due to sudden closure of stomata

Answer:

Watch Video Solution

44. Presence of glycolate in the cells will help to open stomata when there is :

A. High concentration of CO_2

B. Low concentration of O_2

C. High concentration of CO_2 and low O_2

D. High concentration of O_2 and low Co_2.

Answer:

Watch Video Solution

45. When water enters the plant cell one of the pressure is exerted on the cell wall:

A. Turgor pressure

B. Suction pressuere

C. Root pressure

D. Osmotic pressure

Answer:

Watch Video Solution

46. The cohesive force existing between molecules off waer is contributing to:

A. Plasmolysis

B. Translocation

C. Ascent of sap

D. Osmosis

Answer:

Watch Video Solution

47. Opening and closing of stomata is due to the:

A. Hormonal change in guard cells

B. Change in turgor pressure of guard cells

C. Gaseous exchange

D. Respiration

Answer:

Watch Video Solution

48. Root hairs are found:

A. In the zone of elongation

B. Adventitous roots

C. On the root cap

D. Apical meristem.

Answer:

Watch Video Solution

49. Osmotic pressure of a solution is

A. Greater than pure solvent

B. Less than pure solvent

C. Equal to pure solvent

D. More or less than the pure solvvent.

Answer:

Watch Video Solution

50. If the concentration of external solution is more than the cytoplasm, the solution is known as:

A. Hypertonic

B. isotonic

C. Hypotonic

D. None.

Answer:

Watch Video Solution

51. Water is released as droplet this is known as:

A. Root presssure

B. Transpiration

C. Guttation

D. None.

Answer:

Watch Video Solution

52. Stomata of a plant open due ot:

A. Influx of hydrogen ions

B. Efflux of potassium ions

C. Influx of calcium ions

D. Influx of potassium ions

Answer:

Watch Video Solution

53. Plasmodesmata connections help in:

A. Cytoplasmic streaming

B. Synchronous mitotic divsions

C. Locomotion of unicelluolar organisms

D. Movement of substances between cells.

Answer:

Watch Video Solution

54. Dumbshell shaped guard cells are found in:

A. Wheat

B. Bean

C. Groundnut

D. Sunflower.

Answer:

Watch Video Solution

55. Wilting in plant occurs due to:

A. Blockage of xylem

B. Blockage of phloem

C. Both a and b

D. Increased transpiration.

Answer:

Watch Video Solution

56. A plant cell attains turgidity due to:

A. Electrolysis

B. Endosmosis

C. Plasmolysis

D. Hydrolysis

Answer:

Watch Video Solution

57. Which one of the following theories for ascentg of sap was proposed by an eminet Indian sceintist J.C.Boe?

A. pulsation theory

B. Relay pump theory

C. Transpiration purl theory

D. Root pressure theory

Answer: Atmoshperic pressure theory

Watch Video Solution

58. When a fresh-water protozoan possessing a contractile vacuole,is placed in a glass containing marine water,the vacuole will:

A. Disappear

B. Increase in size

C. Decrease in size

D. IOncrease in number

Answer:

Watch Video Solution

59. Water reaches the top of a plant due to:

A. Root presssure

B. Capillarity

C. Transpiration

D. xylem

Answer:

Watch Video Solution

60. A cell when dippen in 0.5 M sucrose solution has no effect bbut when the same cell will be dippen in 0.5 M NaCI solution the celll will :

A. Increase in size

B. Decrease in size

C. Will be turgid

D. Will be plasmolysed.

Answer:

Watch Video Solution

Watch Video Solution

61. Potometer works on the principle of:

A. Amount of watre absorbed equals the amount transpired

B. Osmotic pressure

C. Root pressure

D. Potential differnece between the tip of the tube and that of plant

Answer:

Watch Video Solution

62. During active absorption of water,

A. Energy is not used

B. Transpiration pull provides force for absorption of water

C. Root respiration provides energy

D. Photosynthesis provides energy

Answer:

Watch Video Solution

63. Rate of transpiration id dependent upon:

A. Negative turgor pressure

B. Temperature

C. D.P.D.

D. Mapur pressure deficit.

Answer:

Watch Video Solution

64. The cohesive force of water molecules is the magnitude (Dixon and Jolly):

A. $1 - 10$ atm

B. $45 - 200$ atm

C. $15 - 45$ atm

D. $10 - 15$ atm

Answer:

Watch Video Solution

65. Plasmolysis will occur when the cell is placed in ____ solution:

A. Hypotonic

B. Hypertonic

C. Isotonic

D. Hypotnoic and isotonic

Answer:

Watch Video Solution

66. In hypertonic solution the water potential of cell:

A. Increases

B. Decreases

C. First increases then decreses

D. Remains unchanged.

Answer:

 Watch Video Solution

67. In which of the following plants,there will be no transpiration?

A. Aquatic,submerged platns

B. Plants living in deserts

C. Aquatic plnats with floating leaves

D. Plant growing in hilly regions.

Answer:

Watch Video Solution

68. Stomata can also open at night ,present in :

A. Xerophyts

B. Gametophytes

C. hydrophyte

D. None of theses

Answer:

Watch Video Solution

69. Complementary cells are associated with:

A. Lenticels

B. Hydathodes

C. Rthytidome

D. Bark

Answer:

Watch Video Solution

70. Bulliform cells are found in:

A. Seeds of sunflower

B. Leaf of wheat

C. Pod of pea

D. Tuber of potato

Answer:

Watch Video Solution

71. Potometer works on the principle of:

A. Amount of watre absorbed equals the amount transpired

B. Osmotic pressure

C. Root pressure

D. Potential differnece between the tip of the tube and that of plant

Answer:

Watch Video Solution

72. Which of the following theory gives the latest explanation for closure of stomata?

A. ABA theory

B. Much theory

C. Starch glucose theory

D. Active K^+ tranport theory

Answer:

Watch Video Solution

73. Loss of liquid water by guttation occurs through:

A. Hydathodes

B. Stomata

C. Cuticle

D. Bark

Answer:

Watch Video Solution

74. Movement of H_2O through cell wall is:

A. Apoplast

B. Symplast

C. Tonoplast

D. None of theses

Answer:

Watch Video Solution

75. The path way of the movvement of water through cell wall only is called:

A. Symplast pathway

B. Plasmodesmata path way

C. Apoplast pathway

D. VVaculor pathway

Answer:

Watch Video Solution

76. The rate of transpiration of a plant would gradually increase if:

A. The relative humidity increases

B. The relative humidity decreases

C. The relative humidity remain unchagned

D. The water potential gradient remain unchanged.

Answer:

Watch Video Solution

77. Absorption of diffusible ions by cells against concentrations gradient is called,

A. Passive absorption

B. Active absorption

C. Osmosis

D. Donnan equilibrium.

Answer:

 Watch Video Solution

78. Cohesion and adhesion theory is otherwise called:

A. Relay pump theory

B. Pulsation theory

C. Root pressure theory

D. Transpiration pull theory

Answer:

Watch Video Solution

79. Ascent of sap in plants was demonstrated by:

A. Girdling experiment

B. Gaong's experiment

C. Went experiment

D. Lever auxanometer

Answer:

Watch Video Solution

80. Which one is correct?

A. Movement of water is expressed in terms of free energy

B. Free energy determiunes the direction by which physical and chemical changes should occur

C. Water potential is the sum of free energy of water molecules is pure water and in any other system

D. Water potential of pure water is zero.

Answer:

Watch Video Solution

81. Plasmolysis is the result of:

A. Exosmosis

B. Endosmosis

C. Reverse osmosis

D. Diffusion.

Answer:

Watch Video Solution

82. A cell when kept in sugar solution,gets hydrated.then solution is:

A. Hypotonic

B. Hypertonic

C. Isotonic

D. None of theses

Answer:

Watch Video Solution

Watch Video Solution

83. Guard cells help in:

A. Protection against grazing

B. Transpiration

C. Guttation

D. Fighting against infection

Answer:

Watch Video Solution

84. Cell A has osmotic potential of -18 bars and pressure potential of 8 bars,wheres,cell B has osmotic potential of - 14bars and pressure potential 2 bars. The direction of flow of water will be:

A. From cell B to cell A

B. From cell A to cell B

C. No flow of water

D. In both the directions

Answer:

Watch Video Solution

85. Veins in the leaves are useful for:

A. Transport of water and minerals

B. Mechanical support

C. Transport of organic food material

D. All of the above

Answer:

Watch Video Solution

86. Accumalation of which one of the following results in closure of stomata?

A. Malic acid

B. Aspartic acid

C. Phosphenol pyruvic acid

D. Oxalacitic acid

Answer:

Watch Video Solution

87. Which one of the following is not a charactristic of active transport?

A. Highly selective

B. Transport saturates

C. Uphill transport

D. Insensitive to inhibitors

Answer:

 Watch Video Solution

88. Water in the soil available to plants is:

A. Graviation water

B. Capillary water

C. Hygroscoic water

D. None of theses

Answer:

Watch Video Solution

89. When a cell is plasmolysed,it becomes,

A. Flaccid and its TP becomes 0

B. Turgid and its TP becmoes 0

C. Turgid and TP becomes equal to Op

D. Flaccid and DPD becmoes 0

Answer:

Watch Video Solution

90. The factor most important in regulating tranpiration is:

A. Temperature

B. Light

C. Wind

D. Relative humidity

Answer:

 Watch Video Solution

91. The process by whihc water is absorbed by solids like colloids causing them to increase in volume is called:

A. Osmosis

B. Plasmolysis

C. Imbibition

D. Diffusion

Answer:

Watch Video Solution

92. Select the correct statement:

A. Absorption of water by sees and dry wood are examples of facilated diffusion

B. The apoplast is the system of interconnected protoplasts

C. Pinus seeds cannot germinate and establish without the presence of mycorrhizae

D.

Answer:

Watch Video Solution

93. The translocation in phloem is unidirectional whereas in the xylem it is bidirectional.

Watch Video Solution

94. Fill in the blanks:

The pressure exerted by cell wall to balance turgor pressur is called.....

Watch Video Solution

95. Fill in the blanks

Species A	Species B	Type of Interaction	Example
+	–	(i)	(ii)
+	+	(iii)	(iv)
+	(v)	Commensalism	(vi)

Watch Video Solution

96. Fill in the blanks:

When a cell is placed in hypotonic soluion,water moves into the cell,this flow is called..... .

Watch Video Solution

97. Fill in the blanks:

The form and structure of growing cell are maintained because of ..... .

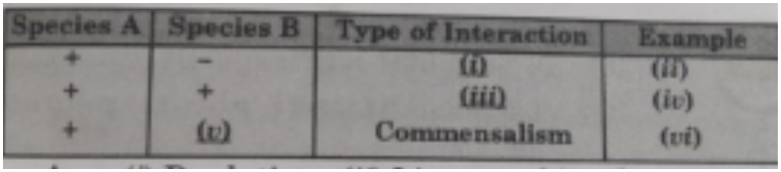
Watch Video Solution

98. Fill in the blanks:

A membrane allowing certain molecules to ewnrter and preventing the other is called a ..... membrane.

Watch Video Solution

99. Fill in the blanks



Species A	Species B	Type of Interaction	Example
+	–	(i)	(ii)
+	+	(iii)	(iv)
+	(v)	Commensalism	(vi)

Watch Video Solution

100. Fill in the blanks:

The value of water potential of pure water at normal temperature and pressure is ..... .

Watch Video Solution

101. Fill in the blanks:

The most acceptable theory of ascent of sap is

..... .

Watch Video Solution

102. Fill in the blanks:

The hydrostatic pressure devveloped in he roots is called ..... pressure.

Watch Video Solution

103. Fill in the blanks:

The .... pressure of guard cells is responsible for the opening of stomata.

Watch Video Solution

104. Fill in the blanks:

..... is the number of stomata per square mm.of leaf suface.

Watch Video Solution

105. Fill in the blanks:

More is the leaf are,..... is the rate of transpiration.

Watch Video Solution

106. Fill in the blanks:

Transpiration is ..... proportional to humidity.

Watch Video Solution

107. Fill in the blanks:

Guttation occurs thorugh the pores called..... .

Watch Video Solution

108. Fill in the blanks:

During passive absorption, water is absorbed as a result of tension created by.....

Watch Video Solution

109. Fill in the blanks:

..... is the exudation of water drops from the tip of margins of lamina at the vein ends.

Watch Video Solution

110. Fill in the blanks:

Metabolic energy of the cell is utilized in ..... absorption of water.

Watch Video Solution

111. Match the item in column A with appropriate item in column B :

Column A	Column B
(i) Vein ending	(a) Transpiration
(ii) Kidney shaped	(b) Osmosis
(iii) Necessary evil	(c) Transpiration pull
(iv) Semipermeable membrane	(d) Guttation
(v) Cohesion	(e) Dicot guard cells
(vi) Stomata closure	(f) Evaporation
	(g) ABA

.

Watch Video Solution

112. Write 'True' or 'False' :

The direction in whiich water will flow from one part of the plant to another depends on water potential in two regions.

Watch Video Solution

113. True or False

Two factors which affect water potential are the amount of solutes and external pressure.

Watch Video Solution

114. True or False

In plant cell, the elastic wall exerts a counter pressure to imbibitional pressure called wall pressure.

Watch Video Solution

115. True or False

The guard cell walls surrounding the aperature are thicker than outer wall.

Watch Video Solution

116. True or False

The stomata open when guard cells take up Ca^{++} from the surrounding cells.

Watch Video Solution

117. Observe the relationship between first two words and then fill the suitable word/words at the fourth place:

Leaves:Foliar transpiration::Stem:_____.

Watch Video Solution

118. Observe the relationship between first two words and then fill the suitable word/words at

the fourth place:

Stomata:Transpiration::Hydathode:____.

Watch Video Solution

119. Observe the relationship between first two words and then fill the suitable word/words at the fourth place:

Levitt:Malate Hypothisis::Steward:_____.

Watch Video Solution

120. Observe the relationship between first two words and then fill the suitable word/words at the fourth place:

Stomata:Transpiration::Hydathode:____.

Watch Video Solution

121. Observe the relationship between first two words and then fill the suitable word/words at the fourth place:

Root hairs:Water absorption::Vessels:___.

Watch Video Solution

122. Observe the relationship between first two words and then fill the suitable word/words at the fourth place:

Osmotic pressure :Osmotic potential::DPD:____.

Watch Video Solution

123. Give the reasons for the following statements:

Cuticle redcues the rate of transpiration.

Watch Video Solution

124. Give the reasons for the following statements:

Water along with dissolved organic and inorganic substances is excreted during the process of bleeding.

Watch Video Solution

125. Give the reasons for the following statements:

Process of transpiration represents the kind of diffusion of water vapours.

Watch Video Solution

126. Give the reasons for the following statements:

Pickles ,meat and fish are preserved by salting.

Watch Video Solution

127. Give the reasons for the following statements:

In acicular leaves like that of Pinus transpiration rate is less.

Watch Video Solution

128. Give the reasons for the following statements:

Raisins swell up when placed in water.

Watch Video Solution

129. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:During raiby season,doors made up of wood generally swell up due to imbibition.

Reason:This hapens due to absorption of water withough forming a solution.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

130. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:In osmosis solvent moves through a semipermeable membrane from a place of lower diffusion pressure a place of higher diffusion pressure.

Reason:It is due to migration of solvent from hypertonic solution to hypotonic solution through a semipermeter membrane.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

131. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:In lotuus metabolism is hindererd when the leaves are coated with wax on uper surfce.

Reason:In lotus ,stomata are present on upper epidermis,so that if leaves are coted ith wax on upper surface ,stone transpiration will not occur.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

132. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and

Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Purple cabbage jleaves do not lose their colour in cold water but do so in boiling water.

Reason:Plasma membrane becomes impermeable in boiling water ariid pigments come out.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

133. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following

four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Guttation takes p-lace through hydathodes.

Reason:Each stoma is made up of two kidney sharped guard cells in dicots.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

134. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following

four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:When plant cells are placed in highly concentrated sugar ofr slat solution,they get plasmolysed.

Reason:HIghly concentrated sugaer or salt solution acts as hyptotonic solution whihc leads to exosmosis.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

135. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you

are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Light plays an important role in process of transpiration.

Reason:Light leads to potning f stomata and in dark stomata get closed.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

136. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you

are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Plasma membrane is a permeable membrane.

Reason:Both solute and solvent can pass through semipermeable membrane.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

137. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you

are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Potometer is used to measure the rate of transpiration.

Reason:it is based on prinicple that water lost in transpiration is equal to water absorbed.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

138. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you

are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Entry of water from soil into xylem takes place through gradient of suction pressure.

Reason:Water moves from a place of higher

suction pressure to a place of lower suction pressure.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

139. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Guttation takes p-lace through

hydathodes.

Reason:Each stoma is made up of two kidney sharped guard cells in dicots.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

140. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:When CO_2 concentration of

atmosphere increases,stomata close partially.

Reason:CO_2 combines with water to form carbonic acid which lowers pH value and stomata close.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

141. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Plant cell wall lacks selective permeability.

Reason:It allows free passage of dissovled material through it.

A. A

B. B

C. C

D. D

Answer:

 Watch Video Solution

142. What is heterophylly?

Watch Video Solution

143. These questions consist of two statements each,printed as Assertion and Reason.While asnwering these questions you are required to chose any one of the following four responses.

If both Assertion and Reason are true and Reason in correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Stomata open during the day.

Reason:Stomata help in gaseous exchange.

A. A

B. B

C. C

D. D

Answer:

Watch Video Solution

144. Name the universal solvent.

Watch Video Solution

145. Why is water essential for plant activities?

Watch Video Solution

146. What is protoplast?

Watch Video Solution

147. What is protoplasm?

Watch Video Solution

148. How are protoplasm of two adjacent cells connected to each other?

Watch Video Solution

149. What is water potential?

Watch Video Solution

150. Name the measurement unit of water potential.

Watch Video Solution

151. List three factors which influence water potential.

Watch Video Solution

152. What do the terms Ψs, Ψp and Ψg denotes?

Watch Video Solution

153. Name the structures which absorb water from soil.

Watch Video Solution

154. What are the two pathways through which water moves?

Watch Video Solution

155. Define transmembrane pathway.

Watch Video Solution

156. Define diffusion.

Watch Video Solution

157. what is membrane permeability?

Watch Video Solution

158. Opening and closing of stomata is due to the:

Watch Video Solution

159. What is guttation?

Watch Video Solution

160. Name the process in which water drops ooze out from margin of leaves.

Watch Video Solution

161. Name th hormone which signals the closure of atomata during severe drought or severe solar radiation.

Watch Video Solution

162. Which fraction of water is available to plants for absorption by roots?

Watch Video Solution

163. Define transpiration.

Watch Video Solution

164. Name the pores through which guttation occurs.

Watch Video Solution

165. Define wall pressure.

Watch Video Solution

166. What are hydathodes?

Watch Video Solution

167. A plant cell when kept in a certain solution got plasmolysed.What was nature of this solution?

Watch Video Solution

168. Define osmotic potential.

Watch Video Solution

169. Define pressure potential.

Watch Video Solution

170. What are subsidiary or accessory cells?

Watch Video Solution

171. What is the water potential of pure water at atmospheric pressure?

Watch Video Solution

172. what will happen to a plant cell when kept in hypotonic solution?

Watch Video Solution

173. Give an account of factors affecting transpiration.

Watch Video Solution

174. What is osmotic pressure? List any three conditions on which osmotic pressure depends.

Watch Video Solution

175. Why is turgidity of cells essential for plants?

Watch Video Solution

176. Differentiate between diffusion and osmosis.

Watch Video Solution

177. Suggest tow types of treatment for reducing transpiration in plant in a field.

Watch Video Solution

178. How is rolling of leaves of many grasses in dry weather caused?

Watch Video Solution

179. List any five mechanism that contribute to the ascent of sap in tall trees.

Watch Video Solution

180. What is the role of K^+ ions in the opening of stomata?

Watch Video Solution

181. What are the two pathways through which water moves?

Watch Video Solution

182. Transpiration is a necessary evil in plants . Explain.

Watch Video Solution

183. Define osmosis. What is the difference between osmosis and diffusion ?

Watch Video Solution

184. Differentiate between TP and WP .How do changes in TP help s in opening and closing of stomata.

Watch Video Solution

185. What are guard cells.Describe the structure of typical guard cells.

Watch Video Solution

186. Define the terms:Plasmolysis.

Watch Video Solution

187. Write a note on guttation.

Watch Video Solution

188. Write the importance of osmosis in plants.

Watch Video Solution

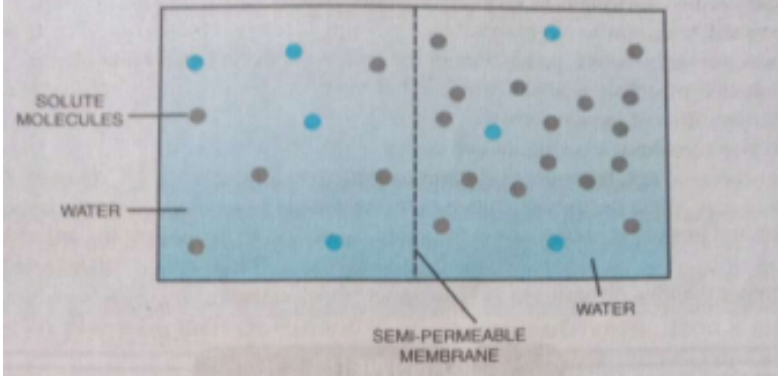
189. Describe the role of osmotic potential in regulating water potential of plant cells.

Watch Video Solution

190. Write the importance of imbibition.

Watch Video Solution

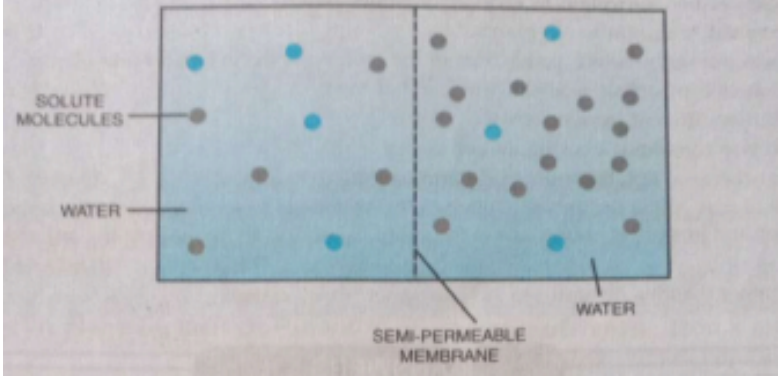
191. Look into given figure and answer the following,



Solution of which chamber has a lower solute potential?

Watch Video Solution

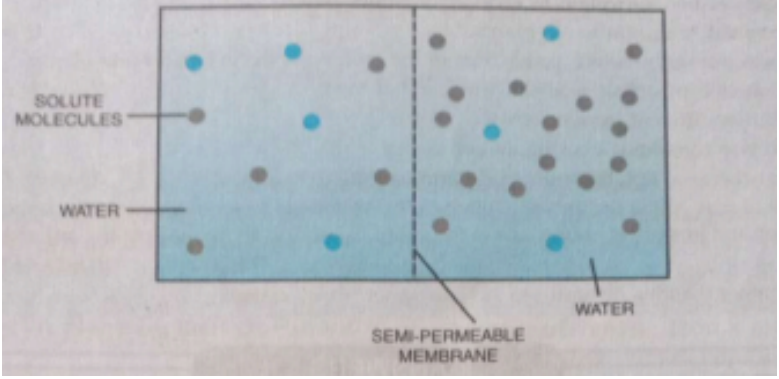
192. Look into given figure and answer the following,



Solution of which chamber has a lower solute potential?

Watch Video Solution

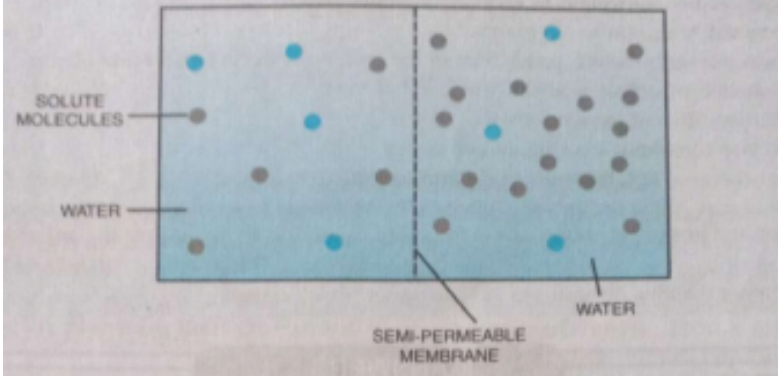
193. Look into given figure and answer the following,



In which direction will osmosis occur?

Watch Video Solution

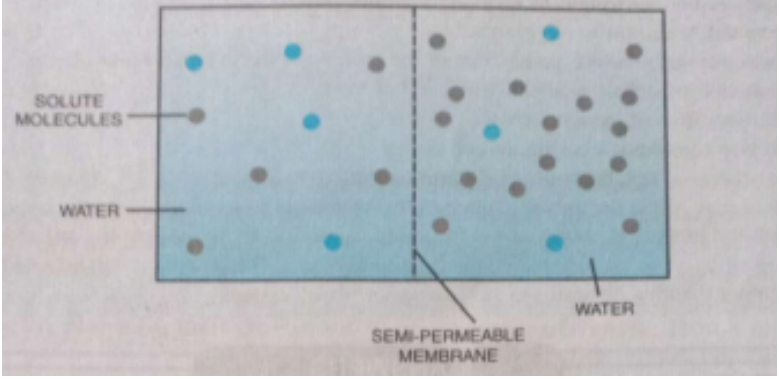
194. Look into given figure and answer the following,



Which solution has a higher solute potential?

Watch Video Solution

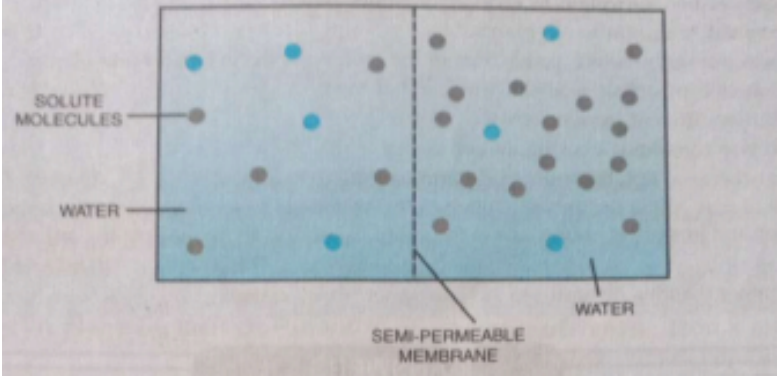
195. Look into given figure and answer the following,



At equilibrium which chamber will have lower water potential?

Watch Video Solution

196. Look into given figure and answer the following,



If one chamber has aψ of - 2000 kPa,and the other - 1000 k P a which is the chamber that has the higher ψ?

Watch Video Solution

197. What is root pressure?

Watch Video Solution

198. Give advantages of transipiration.

Watch Video Solution

199. what are two kinds of interaction of water molecules that allow water to travel upwards in plant?What are other physical processes aid in water transport to top of the trees.

Watch Video Solution

200. How do potassium ions $\left(K^{+}\right)$. regulate the opening and closing of stomata?

Watch Video Solution

201. What is guttation?Name the pore through which guttation occur.What does guttated water contain?

Watch Video Solution

202. What are antitranspirants?Give example.How do they reduce transpiration?

Watch Video Solution

203. Define respiration.Give its advantages and disadvantages.

Watch Video Solution

204. Discuuss Dixon's theory of ascent of sap.

Watch Video Solution

205. Describe K^+ ion theory for opening and closing of stomata.

Watch Video Solution

206. Discuuss Dixon's theory of ascent of sap.

Watch Video Solution

207. Define Arterial Blood Pressure?

Watch Video Solution

208. Give an account of factors affecting transpiration.

Watch Video Solution

209. What is imbibition?Which are the various conditions necessary for the imbibition to take

place?

Watch Video Solution

210. Define plasmolysis .What change will occur,when erythrocytes are placed in 5% NaCl solution.Explain.

Watch Video Solution

211. Describe osmosis as a special case of diffusion.

Watch Video Solution

212. Describe the theories related to translocation of water. Give a brief account of mechanism of stomatal movement.

Watch Video Solution

213. Describe the factors which affect the rate of absorption of water.

Watch Video Solution

214. What a facilitated diffusion?

Watch Video Solution

215. How process of osmosis can be demonstrated by:

Thistle funnel experiment,

Watch Video Solution

216. How process of osmosis can be demonstrated by:

Potato osmoscope.

Watch Video Solution

217. Define pressure potential.

Watch Video Solution

218. What is root pressure?

Watch Video Solution

219. Why is nucleus called director of cell ?

Watch Video Solution

220. Comment "Transpiration and photosynthesis- a Compromise".

Watch Video Solution

221. What is Desmotubule and explain its functions.

Watch Video Solution

222. Describe with the help of well labelled diagrams the mechanisnm of opening and closing of stomata in dicots and monocots.

Watch Video Solution

223. Opening and closing of stomata is due to the:

Watch Video Solution

224. Discuss mechanism of absorption of food.

Watch Video Solution

225. Write briefly the role of transpiration in plants.

Watch Video Solution

226. Name the phenomenon by which water rises in the xylem vessels in small sized plants.

Watch Video Solution

227. Discuuss Dixon's theory of ascent of sap.

Watch Video Solution

228. How is imbibition different from osmosis?

Watch Video Solution

229. Define imbibition. What are two conditions for imbibition to take place?

Watch Video Solution

230. State the importance of imbibition in seed germination.

Watch Video Solution

231. What is meant by stoma?Name the group of plants,which contains fewer stomata on the upper surface of leaves .How does the absorption and loss of poassium ions in the guard cells bring about the opening and closuure of stmata?Explain.

Watch Video Solution

232. What is Desmotubule and explain its function.